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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/763,605	01/22/2004	Casey Loyd	14015-1	7259

7590 03/30/2007
SHELDON & MAK
225 South Lake Avenue, 9th Floor
Pasadena, CA 91101

EXAMINER

HUYNH, KHOA D

ART UNIT	PAPER NUMBER
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3751

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/30/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/763,605

Applicant(s)

LOYD ET AL.

Examiner

Khoa D. Huynh

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 5/21/04; 2/10/05; 6/6/06
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over applicant's prior art of Figure 4 in view of Shapess (5514943) and Phillips et al. (4453118).

Applicant's prior art of Figure 4 discloses a variable speed electrical motor capable of operating at one of a plurality of discrete operating speeds. The motor includes a start winding and a start capacitor. Applicant's prior art DIFFERS in that it does not specifically include a start winding and a start capacitor for each speed as claimed. Attention, however, is directed to the Shapess reference which discloses that single phase, variable speed motors are known to be constructed in a capacitor start configuration, wherein the start circuit includes start windings connected in series with start capacitors in order to provide the high torque during start conditions (col. 1, lines 19-30). Attention is also directed to the Phillips et al. reference which also discloses that capacitors may be placed in series with the start windings for further increase the phase displacement of currents between the windings in a known manner (col. 4, lines 55-60). Therefore, it would have been obvious to one of ordinary skill in the art at

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the time the invention was made to have modified the applicant's prior art of Figure 4 by employing the start winding and start capacitor combination, in view of the teachings of Shapess and Phillips et al., in order to provide the high torque during start conditions and to increase the phase displacement of currents between the windings in a known manner.

3. Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over the modified applicant's prior art of Figure 4 (as discussed in paragraph 2) in view of Fisher et al. (6121746).

The modified applicant's prior art of Figure 4 DIFFERS in that it does not specifically include a switch disposed externally as claimed. Attention, however, is directed to the Fisher et al. reference which discloses that two speed induction motor are commonly used in swimming pools and spa pumps, and the high and low speeds are typically selected as desired with an external switch (col. 1, lines 7-19). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the applicant's prior art of Figure 4 by employing the external switch, in view of the teaching of Fisher et al., to allow the user to manually select either high or low speed for the running operation of the motor. Since the motor is used in a water-contacting environment, it would be wise to enclose the external switch in separate switch box to improve safety.

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4. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lau (6412123) in view of the modified applicant's prior art of Figure 4 (as discussed in paragraph 2).

The Lau reference discloses a water recreational or spa (Fig. 1). The spa includes a water basin (at 34), a water pump (86), an electric motor (88) for driving the water pump and water circulation conduits (Figs. 5 & 6). The Lau reference DIFFERS in that the electric motor is not a variable speed motor as claimed. Attention, however, is directed to the modified applicant's prior art of Figure 4 which discloses a variable speed electrical motor having all features as discussed in paragraph 2. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the Lau reference by employing a variable speed electrical motor, in view of the teaching of the modified applicant's prior art of Figure 4. Such modification would be considered a mere substitution of one functionally equivalent electrical motor for another in the spa art that would work equally well on the Lau reference.

5. Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lau (6412123) in view of the modified applicant's prior art of Figure 4 (as discussed in paragraph 3).

The Lau reference discloses a water recreational or spa (Fig. 1). The spa includes a water basin (at 34), a water pump (86), an electric motor (88) for driving the water pump and water circulation conduits (Figs. 5 & 6). The Lau

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reference DIFFERS in that the electric motor is not a variable speed motor as claimed. Attention, however, is directed to the modified applicant's prior art of Figure 4 which discloses a variable speed electrical motor having all features as discussed in paragraph 3. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the Lau reference by employing a variable speed electrical motor, in view of the teaching of the modified applicant's prior art of Figure 4. Such modification would be considered a mere substitution of one functionally equivalent electrical motor for another in the spa art that would work equally well on the Lau reference.

Regarding claim 6, as schematically shown in Figure 1, the water basin, the pump and so on are enclosed with a spa surround, i.e. the spa room.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Khoa D. Huynh whose telephone number is (571) 272-4888. The examiner can normally be reached on M-F (7:00-3:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Huson can be reached on (571) 272-4887. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

A handwritten signature in black ink, appearing to read 'Khoa D. Huynh', with a horizontal line underneath it.

Khoa D. Huynh
Primary Examiner
Art Unit 3751

HK
03/28/2007